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Conspicuously Concealed: Federal Funding, Knowledge Production, and the Criminalization of Gun Research

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Abstract

A popular narrative in the U.S. gun debate concerns federal funding of gun research: Because of a right-wing backlash against gun-related public health research (centered on the controversial Kellermann et al. study), federal funding of gun research has been frozen since the mid-1990s. How accurate is this popular "funding freeze" narrative—or is the federal funding of gun research better described as a "chill"? If the latter, what kinds of funding have persisted within this "chill"? Drawing on public data on funded project abstracts from 1996 to 2016 from three major federal institutes (the National Institute of Justice, the National Science Foundation, and the National Institutes of Health), this paper shows that despite funding cuts to the Centers for Disease Control and Prevention (CDC), federal funding for gun research has continued, especially for studies that construct the focus of their study as gun *crime*. Specifically, we find that a criminal justice approach to the study of guns and gun-related topics dominates the project abstracts analyzed and that this approach also casts a shadow on other approaches—especially public health and social justice approaches—to the research of guns. Examining federally funded gun research from a social constructionist lens provides insight not just into federal funding of gun research but also into the dominant framings of gun policy within the United States: criminal justice approaches to gun research may reinforce an understanding of gun violence as a problem of crime and justify criminalizing strategies in gun policy.

Keywords

crime, law, and deviance, firearms, public policy, federal funding

Introduction

A popular narrative in the U.S. gun debate concerns federal funding of gun research: Because of a right-wing backlash against gun-related public health research, federal funding of gun research has been frozen since the mid-1990s. The origins of this popular "funding freeze" narrative are rooted in the Centers for Disease Control and Prevention's (CDC) funding of research examining

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the causes and consequences of gun violence during the 1980s and into the 1990s, including the scholarly and popular attention given to A. L. Kellermann's (1993) findings that guns in the home are associated with an increased risk of homicide. These studies were met with a backlash from the lobbyists, politicians, and everyday Americans committed to gun rights, which collectively sought to delegitimize research that could potentially be leveraged to threaten such rights. Indeed, as early as 1989, the National Rifle Association's (NRA) *American Rifleman* encouraged its readers to oppose the use of CDC's funding to "conduct anti-gun pseudo-scientific studies disguised as research" in reference to some of the early studies of public health scholar Kellermann (1993). In the 1990s, the NRA called federal agents "jack-booted thugs"; pro-gun rights Americans surged the membership rolls of the organization; NRA-backed conservative politicians campaigned on the issue of gun rights to win back control of the U.S. Congress; and the NRA and other pro-gun rights organizations rallied against research suggesting that guns are harmful.

By 1996, the U.S. Congress passed the NRA-backed "Dickey Amendment" as a rider on the federal omnibus spending bill. It specifically targeted the CDC's involvement in gun research, stipulating that "none of the funds made available for injury prevention and control at the Centers for Disease Control and Prevention (CDC) may be used to advocate or promote gun control" and earmarked $2.6 million—the amount used the previous year for firearms research—for traumatic brain injury research (Jamieson 2013). The Dickey Amendment ushered in prolonged cuts to gun research funded by the CDC. For roughly two decades, the CDC declined to fund gun-related research out of concerns of reprisal; it even informed the NRA if any gun research inadvertently ended up on their funding ledgers (Lou 2011).

Although often popularly portrayed as a ban on federal funding of gun research, the Dickey Amendment's "funding freeze" is better described as a "chill" with regard to gun research. Despite budget cuts targeting the CDC and a backlash against high-profile public health research on gun violence, funding remained available for other forms of gun research and for other agencies. The question, then, is what kinds of funding have persisted within this "chill"? To answer this question, we use public data on funded project abstracts from 1996 to 2016 from three major federal institutes—the National Institute of Justice (NIJ), the National Science Foundation (NSF), and the National Institutes of Health (NIH)—to map a terrain of federal funding of gun research. We show that federal funding for gun research has been forthcoming—at least for studies that approach the object of their study and the set of possible interventions in terms of the study of gun *crime*. To make sense of this finding, this paper draws on the scholarship on the politics of knowledge production and puts it into conversation with theories of crime and criminalization as a primary way of knowing, understanding, engaging, and solving social problems.

While evaluating the full impact of gun research on broader understandings of gun violence is beyond the scope of this paper, this continued funding of gun *crime* research likely has important consequences for gun politics and gun policy. First, this research focus reflects and reinforces an understanding of gun violence as a problem of crime, eclipsing forms of gun harm that do not fit socio-legal understandings of crime (such as harms due to non-criminal gun violence including gun suicide, traumas that ricochet from surviving gun violence, and inequalities resulting from disparate enforcement of laws regulating gun crime). Next, it provides a "scientific" foundation to justify and promote criminalizing approaches to gun policy. And finally, it provides an avenue through which gun control may be implemented, not through highly-politicized, preemptive policies such as restricting the sale of specific types of firearms, but through a conspicuously concealed exercise of gun regulation—a "War on Guns"[1] (Carlson 2020; Forman 2017)—that draws on the criminal justice apparatus to enact the post-hoc control of guns and those who wield them.

Our paper begins by building our theoretical framework, first laying a foundation for understanding the relationship among politics, federal funding, and the production of knowledge before situating the contemporary production of knowledge about guns in the context of what

J. Simon (2007) calls "governing through crime." We then build our empirical case, outlining our database of project abstracts as well as our analytical strategy comprised of topic modeling and qualitative coding. Finally, we present our analysis of four distinct (though not mutually exclusive) approaches to federally funded gun research that we derived from our analysis: a criminal justice approach, a public health approach, a social justice approach, and a political culture approach. We use the term "approach" to designate how research *constructs gun harm as an object of analysis* and *implicitly or explicitly advocates or endorses particular interventions into addressing gun harm*. We demonstrate not just that a criminal justice approach to the study of guns and gun-related topics dominates the project abstracts analyzed here; this approach also casts a shadow to shape how other approaches—especially public health and social justice approaches—engage the topic of guns. Overall, our study contributes to debates about the federal funding of gun research by empirically documenting the post-Dickey Amendment terrain of federally funded gun research, and it also expands on theoretical approaches to the politics of policy knowledge by integrating literatures on the politics of funding with the politics of crime.

The Politics of Knowledge Production

E. Leahey (2008:34) notes that "research is a human activity, not immune to social influences, and social research is no exception." Existing scholarship on the politics of knowledge production alerts us to how power operates through science, both as an outside influence shaping the terrain of science *as well as* through the very tools with which scientists themselves use to vie over this field. On one hand, the sociology of knowledge production reveals the struggle of those positioned *outside* of scientific fields to marshal knowledge production to political ends, while on the other hand, it provides insight into the struggles of those positioned *within* scientific fields to produce knowledge viewed as intelligible and legitimate—in short, as truth.

The development of public science funding in the twentieth-century United States reveals science's intimate ties to politics and political objectives. As economists W. N. Butos and T. J. McQuade (2006:199) summarize, "government is a Big Player in science whose behavior is capable of dominating the flow of signals guiding the direction and intensity of scientific research." While sporadic government funding supported scientific programs before the twentieth century, three major exigencies in the early twentieth century—World War I, the Great Depression, and World War II (Butos and McQuade 2006; Geiger 1988)—led the U.S. government to engage in protracted funding related to military prowess and economic collapse. After World War II, however, the federal government did something unusual: Rather than suspend research with universities at the resolution of crisis, it continued collaboration (Butos and McQuade 2006:180). Arguing that the United States' military accomplishments during World War II were made possible by "the anterior achievements of pure, disinterested investigation," science administrator Vannevar Bush saw the federal government as the only institution in society capable of supporting this kind of public good that was very much in the long-term interests of the state (Geiger 1988:340).[2] This reasoning—encapsulated by G. Eyal (2019:103) as "the scientization of politics"—stipulated science and government as natural bedfellows: not only should government fund science as part of its mandate to enhance the common good, but science promised to make government more efficient and more effective.[3]

But as Eyal (2019:103) notes, "the 'scientization of politics' and the 'politicization of science' continuously infect and entangle one another." As the twentieth century marched on, science funding would increasingly become a site of protracted contestation. Sparked by the surge in identity politics starting in the 1960s, Americans mobilized to shape the contours of science funding. For example, medical advocacy groups worked to demand that grants prioritize research to treat breast cancer (Kolker 2004), HIV/AIDS (Epstein 1996; France 2016), and dozens of other diseases (Best 2019). Focusing on the politics of medical research, R. K. Best (2019:795) notes

that "political environments are not only a context for social movements—they are also a field that social movements work to reshape." This observation is likewise crucial to understanding the impact of political polarization on the politics of knowledge. Coming into national focus during the Reagan administration, Americans became increasingly politicized by the so-called "culture wars," a term used to describe acrimonious divisions among Americans on hot-button issues framed in terms of culture, morality, and values. This cultural and political polarization has extended to attitudes about science. For example, confidence in science declined among conservatives from 1974 to 2010 (Gauchat 2012), reflecting a neoliberal distrust in government intervention into knowledge production, on one hand, and on the other hand, a populist[4] distrust of the uses of science—particularly "professional science" as an elitist enterprise—to inform public policy (Gauchat 2015:740). Accordingly, conservative efforts have been effective in mobilizing against federal funding for research on stem cells (Wolinsky 2010), climate change (McCright and Dunlap 2003), and guns (Metzl 2019). Even the university itself—often popularly disparaged as a hotbed of liberal thought—has been increasingly seen as the undue beneficiary of federal largess not just through grant funding but also earmarking (Savage 2000).

Critiques of the intrusion of politics into science, however, run the risk of suggesting a false dichotomy between science and politics. As P. Bourdieu (1975:21) cautions,

> an analysis which tried to isolate a purely "political" dimension in struggles for domination of the scientific field would be as radically wrong as the (more frequent) opposite course of only attending to the "pure," purely intellectual, determinations involved in scientific controversies.

Rather, science is best understood as "the locus of a political struggle for scientific domination" (Bourdieu 1975:22; see also Ritzer 1975). From this perspective, the "bitter and fraught" struggles within science involve "nothing less than the proper interpretation of our culture's most highly valued form of knowledge—its truth" (Shapin 1995:292). Accordingly, as M. Foucault (1980:132) notes, "it is necessary to think of the political problems of intellectuals not in terms of 'science' and 'ideology' but in terms of 'truth' and 'power.'" In making this distinction, Foucault makes a crucial theoretical move, as A. Swidler and J. Arditi (1994:314) note, from focusing on "what people think" to interrogating the conditions of "what is thinkable." In Foucault's (1980:131) words,

> Truth is a thing of this world . . . each society has its regime of truth, its "general politics" of truth—that is, the types of discourse it accepts and makes function as true; the mechanisms and instances that enable one to distinguish true and false statements; the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true.

This conceptualization of truth reminds us of the power relations embedded in scientific and other forms of knowledge (Hacking 1979), and that "what might start as an epistemological construct solely becomes an element in the construction of social reality itself—*the epistemological being thus transformed into the ontological*" (Arditi 1994:604). Indeed, even the seemingly "pure" pursuit of science—as T. Kuhn (2012) develops in his famous *The Structure of Scientific Revolutions* and Bourdieu (1975) critiques as naive—is patterned by paradigms that structure which questions are viewed as worthwhile, which ways of going about answering those questions are considered legitimate, and which are the defensible means of evaluating those answers.[5] Those paradigms are not merely confined to science proper. Following J. Arditi (1994:604), knowledge can be understood as following a cultural paradigm (i.e., "both an epistemological and an ontological construct"). As such, dominant approaches for understanding everyday social life (e.g., role-playing in Arditi's analysis, or crime and criminal justice in the present analysis)

inform and render intelligible, albeit often imperceptibly, dominant scientific theories (e.g., Goffman's dramaturgical sociology as per Arditi, or criminal justice approaches to guns as per our analysis).[6] Abstract assumptions about how the world works—whether academic theories or folk categories—can profoundly impact the social construction of reality.[7]

Returning to the gun debate, these insights from the sociology of knowledge production reveal that debates about gun funding *are* about generating knowledge about guns, no doubt. However, they are *also* about the recognized authority of scientists to demarcate what constitutes gun knowledge as well as which frames scientists have at their disposal to construct guns as an object of study. The popular understanding of the intersection of politics and gun scholarship—that is, the "funding freeze" narrative—captures political backlash against gun research and the CDC's subsequent funding freeze. However, it misses the broader political context in which gun scholarship has unfolded in recent decades. Specifically, we argue that the politics of gun scholarship must be situated not just within the culture wars of American politics but also within the context of the War on Crime (Alexander 2020; Forman 2017; Garland 2012; Simon 2007; Wacquant 2001).

Knowing through Crime

While the popular "funding freeze" narrative implies an abeyance of research on gun violence, the pushback against public health studies such as A. L. Kellermann et al.'s (1993) better indicates a backlash against studies on gun harm drawing from *particular* approaches. We use the term "approach" (rather than competing terms like "narrative" or "frame") to call specific attention to how researchers (1) construct their object of study and (2) implicitly or explicitly circumscribe the range of possible interventions. After all, there are many approaches through which knowledge about firearms may be generated. For example, public health perspectives may treat guns as posing an inherent risk as harm-inducing objects to individuals or communities and emphasize measures to prevent, control, and/or reduce harm (e.g., Hemenway 2010), while a social justice lens may develop understandings of gun harm as inextricably linked with institutionalized social inequalities. A political culture approach may, in contrast, center the cultural and political dimensions that influence gun ownership and gun risk (e.g., Kahan and Braman 2003). Although there are numerous scholars adopting public health, social justice, and political culture approaches to guns, our analysis suggests that federally funded gun research in the post-Dickey Amendment era is dominated by one particular approach: a criminal justice approach that emphasizes gun harm as arising in conjunction with criminal activity and that focuses on the criminal justice system as a key avenue for interventions. The dominance of this criminal justice perspective in federally funded research on guns resonates with how crime has shifted over the second half of the twentieth century from one among many social problems to a primary lens through which social life is understood and experienced.

As a backlash to the Civil Rights movement, American politicians and the public increasingly embraced "tough on crime" policies and politics that criminalized Black people and people of color, instituting a new era of racial control known as the "new Jim Crow" (Alexander 2020) and initiating a transformation in governance more broadly. The resulting War on Crime, as Simon (2007) shows, ushered in an era of "governing through crime": The state has come to view managing and preventing crime as its primary task. Citizens have come to conceive of themselves as victims, or potential victims, of crime, and crime has become the lens through which other social issues are understood. Through this process, the clarion call of crime plays a key role in mobilizing and legitimating proactive, aggressive state approaches to social problems (Garland 2012). But governing through crime is not limited to the state. From the explosion of private security firms (Joh 2019) to television shows featuring high-stakes policework (Sabin, Wilson, and Speidel 2015), "governing through crime" is diffused so that "the technologies, discourses, and

metaphors of crime and criminal justice have become more visible features of all kinds of institutions" (Simon 2007:4). Even everyday people's actions aimed at deterring crime may come to be viewed as synonymous with responsible citizenship and codified in the legal system as valid exercises of authority, such as through "Stand Your Ground" laws (Carlson 2015) or citizen-initiated mug-shot Web sites (Lageson 2020).

As technologies and discourses of crime and criminal justice have increasingly penetrated social life, these technologies and discourses have also become increasingly technocratic. For example, under what M. M. Feeley and J. Simon (1992) term "the new penology," crime policy has shifted from rehabilitation toward risk-mitigation of those groups viewed as posing the greatest criminal threat. According to them, the problem of criminal justice has become less a social problem (how do we rehabilitate? How do we facilitate re-entry?) and more a technical problem (how do we house inmates most efficiently?). Such an emphasis on technocratic solutions is visible throughout the criminal justice system, as police, courts, and prisons have expanded their forensic capacities and increasingly adopted risk algorithms and surveillance technologies (Brayne 2017; Brayne and Christin 2020). Meanwhile, everyday people embrace an array of "tough on crime" technologies as a response to the problem of crime, including home security systems, SUVs, cell phones, and guns (Carlson 2015; Simon 2007). Importantly, these technocratic approaches to crime reflect not just shifting ideas about what constitutes appropriate mechanisms of crime control but also shifting linkages between knowledge and power. As M. Foucault (2012) reminds us, even (or especially) seemingly apolitical discourses can serve as the powerfully subtle capillaries of control. Foucault's insights bring us back to the question of knowledge production—and, particularly, how "governing through crime" works to channel seemingly technocratic or apolitical knowledge in the service of crime control.

We thus find it useful to highlight "knowing through crime" as a key component of "governing through crime." We also acknowledge that as a social phenomenon shaping the production of knowledge, "knowing through crime" predates the War on Crime as an example of epistemological racism (Scheurich and Young 1997).[8] As K. G. Muhammad (2019) demonstrates in *The Condemnation of Blackness*, racist ideas about criminality did not just drive criminal justice action; they also drove the development of new scientific tools, such as statistics, to demonstrate the criminality of purported social groups in the late nineteenth and early twentieth century, developments recognized by W. B. Du Bois (1898) at the time as unscientific, unsystematic, and uncritical. As scientific racism increasingly turned to the language of crime and criminality, empirical inquiry served to putatively "prove" a link between Blackness and criminality, reifying the mistaken notion that innate differences marked different racial groups. By the 1960s, these ideas constituted taken-for-granted ways of knowing and imagining crime in American society (particularly among white Americans), taking the form of what M. Polanyi (2009) might call "tacit knowledge" or what is analyzed today as "implicit bias" (e.g., Eberhardt et al. 2004; Goff et al. 2008).

It is upon this long-standing foundation of the racialization of crime that the War on Crime deepened the relationship between knowledge and criminal justice. As Simon (2007:78) notes, with the 1968 Safe Streets Act (one of the initiating laws of the War on Crime) came not just state investment in criminal justice institutions but also "a cluster of ways of knowing and acting toward crime that have profoundly influenced and deformed American democracy." Following Foucault's insights regarding how discourse shapes what is "thinkable," we suggest that the prevalence of crime and criminal justice discourses in the late twentieth-century United States has impacted how we think about not just *social* problems but also *scientific* problems. Furthermore, following a Bourdieusian perspective that emphasizes science as a struggle for legitimacy in knowledge production, we suggest that just as invoking crime and criminal justice discourses grants legitimacy to the putatively colorblind exercise of public and private authority in schools, workplaces, and families,[9] so too may an emphasis on crime and criminal justice discourse legitimate claims of scientific authority, including for gun research.[10]

In this paper, then, we use the term "knowing through crime" to capture a logic shaping the production of gun-related knowledge—one that circumvents the controversies of public health gun research by tapping into the legitimacy-granting nature of crime and criminal justice thinking, discourse, and technology. The employment of a rationalistic, technocratic, and colorblind criminal justice framework to federally funded research on guns may represent the convergence of "governing through crime," on one hand, and a political struggle over the boundaries of scientific authority regarding firearms, on the other. Or, perhaps better put, "knowing through crime" captures the degree to which the broader phenomenon of "governing through crime" provides a resolution to these political struggles, even as they limit the potential for other avenues of inquiry into gun harm (see, e.g., R. Walters 2003 on the technocratic turn in criminological research).

Our analysis of project abstracts of research funded by NIH, NIJ, and NSF demonstrates that "knowing through crime" has become a dominant mode of generating knowledge on guns in the U.S. context. In line with scholarship that more broadly examines how societal responses to crime and criminal justice transform social problems, depoliticize civic life, and legitimate certain approaches to inequality and harm (e.g., Alexander 2020; Forman 2017; Garland 2012; Simon 2007; Wacquant 2001), we find that the criminal justice approach in gun research tends to define gun violence as a *crime* problem rather than a *social* problem. In doing so, this approach depoliticizes guns by approaching gun harm as a problem of forensics, and it resonates with a conspicuously concealed form of gun criminalization—a "War on Guns" (Carlson 2020; Forman 2017)—that benefits from broad-based support for criminalizing approaches to social problems (Simon 2007) while posing harm to those—particularly Black people and people of color—who bear the brunt of criminalization (Alexander 2020; Forman 2017; Wacquant 2001).

Our empirical analysis demonstrates both the dominance of the criminal justice approach within our data set of federally funded research and the different forms that this approach takes, especially in intersection with alternative approaches such as public health, social justice, and political culture perspectives. Overall, we demonstrate that despite significant cuts to CDC research on guns, federal gun scholarship funding has continued in ways shaped not just by the immediate politics of guns but also by the broader politics of crime.

Methodological Approach

This paper analyzes data on funded projects from three major federal funders beyond the CDC: the NSF,[11] the NIH,[12] and the NIJ.[13] To create a database of project abstracts substantively involving guns and firearms, we searched the publicly available funding databases of these three funders for two decades following the passage of the Dickey Amendment from 1996 to 2016. We used broad search terms: "shooting," "shootings," "firearms," "firearm," "gun," and "guns," resulting in over 3,600 search results. We then manually sifted through publicly available project summaries to remove duplicate results, irrelevant results, and results outside of our time period, leaving 125 funded projects substantively focused on topics related to guns, firearms, and/or shootings. See supplemental appendix Table 1a for a breakdown in terms of projects funded, total amount funded, and average project funded; see supplemental appendix Table 1b for a breakdown in terms of funded projects across recipient type (i.e., universities, think tanks, government agencies, and private corporations). We note that our data focus on funded projects, not all funding applications, so our data do not allow us to distinguish between selection effects due to *funding agency* selection versus *applicant* selection; we return to this issue in our conclusion.

Supplemental appendix Table 1 shows a large number of studies funded by the NIJ—an agency aimed at funding pure and applied science in the areas of crime and criminal justice. While in our coding scheme, NIJ funding, in itself, was not treated as indicative of a criminal justice approach, these preliminary numbers already suggest a prevalent approach to the issue of guns in America as one of *crime*. To better understand the prevalence of criminal justice as a

research approach and how it intersects with other approaches, we undertook a two-step analysis of project abstracts. In step 1, R.J. developed topic models. Results of testing for model specifications are presented in supplemental appendix Figure 1, showing that coherence[14] (a measure of overall model quality) initially peaks (0.4322) at around 26 topics, followed by a sharp decline and then only marginal improvement to model fit when greater than 42 topics are specified. In addition, comparison of results from models with 26 and 46 topics did not suggest any further analytic insights were attained with the inclusion of additional topics. As such, 26 topics were specified in the final model. See Table 2 in the supplemental Appendix for a description of these topics, including key words and the number of project abstracts for which this was the dominant topic (note that in the topic modeling analysis, each project abstract could be associated with up to only one topic in supplemental appendix Table 2).

As discussed in further detail below, topic modeling guided us to four dominant approaches: criminal justice, public health, social justice, and political culture. Accordingly, we qualitatively coded each project abstract according to these approaches; a single abstract could be coded with multiple, or no, approaches. J.C. performed the first round of coding and abductively developed working definitions of each approach (Tavory and Timmermans 2014); R.J. independently coded all of the abstracts based on these definitions. Our initial round of coding resulted in 96 percent consensus; after discussion, we reached 100 percent consensus. In developing our analysis below, we paid special attention to not only how these approaches appeared but also when they appeared in conjunction with one another.

Approaches to Gun Research

Scholarly research on guns often accomplishes two moves: it constructs guns as objects of *analysis* as well as—whether implicitly or explicitly—as objects of *intervention*. Accordingly, topic modeling provided us with an initial mapping for understanding the varying approaches to guns in our data set. We derived a 26-topic model (coherence score = .4322); see Table 2 with the full set of topics in the supplemental appendix.

First, topics related to criminal violence and criminal justice (Topics 1, 9, 21, 25; total documents for which these topics were dominant, $N = 14$), law and illegality (Topics 2, 6; $N = 14$), and forensics (Topics 4, 8, 10, 15, 16, 24; $N = 36$) comprised nearly half of the topics derived from the topic modeling and covered over half of the documents, suggesting criminal justice as a dominant approach within the data set. We note that 51 out of 64 abstracts associated with criminal justice topics were funded by the NIJ; 26.4 percent and 29.6 percent of NIH and NSF project abstracts, respectively, were associated with criminal justice topics. This suggests both the prevalence of criminal justice approaches *across* funding agencies as well as the dominance of the NIJ as a funding agency mandated to fund criminal justice research, an observation we return to below (see supplemental appendix Table 3a).

Next, topic modeling grouped project abstracts that located gun violence in social institutions, such as the school (Topic 7; $N = 6$) and the community (Topics 13, 14; $N = 4$), or as pertinent to a particular stage in the life course, as studies of youth risk suggest (Topics 12, 23; $N = 10$). We also note sets of project abstracts focused on trauma leading up to or in the aftermath of gun violence (Topics 0, 22; $N = 7$) as well as emergency protocols in the aftermath of gun violence (Topics 5, 17; $N = 11$). These topics seem, at least initially, suggestive of a public health approach: they take a more epidemiological approach to gun violence, embedding gun violence in psychological, community and social dynamics; they broadly define the impact of gun violence beyond those most directly involved; and they also look beyond traditional criminal justice responses. We note that over half of abstracts associated with public health topics were funded by the NSF and NIH, while NIJ-funded project abstracts associated with public health topics make only 20.3 percent of all gun research funded by the agency (see supplemental appendix Table 3b). As we

will see, our qualitative analysis (which allows to code each abstract with multiple frames rather than a single dominant frame as under topic modeling) reveals that the public health approach often draws from, and is conflated with, the criminal justice approach.

Finally, topic modeling suggested two additional, and distinct, approaches: one focused on addressing bias, especially racial bias, in the criminal justice system in the form of police violence (Topic 19; N = 3), and one focused on the political cultures underlying gun policy and gun attitudes (Topic 20; N = 4). All of these studies were funded by the NSF (see supplemental appendix Tables 3c and d). We considered these suggestive of social justice and political culture approaches, respectively.

With topic modeling providing a roadmap, we now turn to a more in-depth interpretation of research funded by federal sources based on our qualitative analysis. We start by disentangling the preponderance of criminal justice–oriented project abstracts on guns, revealing how these project abstracts frame gun harm as a crime problem and also function to *depoliticize* gun harm by turning it into a forensic problem. We then turn to public health project abstracts, which often, though not always, appeal to criminal justice thinking.[15] This suggests to us the power of criminal justice thinking in shaping not just the gun debate, but gun research as well. We conclude the analysis section of this paper by examining the groups of project abstracts that persistently adopted explicit alternatives to the criminal justice approach: research that engages political culture and research that engages social justice.

The Criminal Justice Approach

The criminal justice approach constructs gun harm as a *problem of crime*, and it focuses on developing and/or evaluating interventions that draw on *criminal justice apparatuses and institutions*, including patrol work, detective work, sentencing, incarceration, probation, and re-entry. The criminal justice approach was the most frequent approach across federally funded research in our sample. Among project abstracts, 84 adopted a criminal justice approach according to our qualitative analysis (see supplemental appendix Table 4) and yielded a total of nearly $32 million in funding. As expected given the NIJ's focus on criminal justice, 86.1 percent of NIJ abstracts adopt the criminal justice approach ($N = 68$), but perhaps more surprisingly, a significant portion of NIH (42.1 percent; $N = 8$) and NSF (29.6 percent; $N = 8$) studies also adopt a criminal justice approach according to our qualitative analysis,[16] reflecting the broad prevalence of this approach across funding agencies.

Treating guns as criminogenic objects, project abstracts adopting a criminal justice approach took a variety of approaches to gun *crime*. These include developing risk profiles for individuals, understanding co-offending, identifying at-risk community factors, and assessing networks of gun offenders, including the traffic in illegal gun markets. In many cases, the employment of this approach was implicit, identified not through direct discussion of criminal gun use (some abstracts did not mention crime per se), but through general discussion of "gun violence" that presented such violence as intentional rather than arising through negligence and that granted no attention to state-sanctioned violence. In contrast, project abstracts using a public health or social justice approach almost always stated this framing in an explicit way (see below).

Roughly three dozen project abstracts focused explicitly on examining persons with criminal involvement, individualizing the problem of crime. For example, these project abstracts focused gun-involved individuals designated as "high-risk" and those re-entering the community after firearms offenses, respectively.

> The purpose of this project is to examine the distribution of guns among people at highest risk of being involved with illegal use of firearms in Chicago, Illinois. ("Underground Markets in Chicago," NIJ 2014)[17]

> This study will conduct a process and outcome evaluation of the Project Safe Neighborhoods (PSN) gun violence reduction interventions [including] a program of strategies directed toward released inmates reentering the community and a program of strategies to decrease gun violence among the most violent offenders. ("Evaluation of a Comprehensive Approach to Reducing Gun Violence in Detroit," NIJ 2004)[17]

These excerpts illustrate how gun violence is treated as a problem of crime and criminal justice (Simon 2007), one animated by the compounding of at-risk individuals in at-risk communities engaging in at-risk activities, resulting in criminality. As in these excerpts, project abstracts at times focused on high-crime urban areas, explicitly connecting this designation to high rates of gun violence. For example, one study redundantly noted, "The purpose of this . . . research project is to examine high-risk people, social networks, and places . . . in four *urban cities*" (emphasis added, "A Tale of Four Cities," NIJ 2013)[17]. This marking of context carries implicit racialization (whereby "urban" is a racial code word for at-risk racial minorities; see Anderson 2012; Omi and Winant 2014) that connects criminogenic propensities with people of color.[18]

In addition to constructing a narrow scope of gun violence and its etiology in ways that emphasized concentrated criminality (whether reflecting a concentration of at-risk activities or at-risk individuals), the criminal justice approach also entailed the evaluation and/or development of criminal justice interventions. These included a variety of law enforcement interventions. For example, one study evaluated a focused deterrence strategy implemented in conjunction with the Philadelphia Police Department and the city's District Attorney/s Office:

> In collaboration with the District Attorneys (DAs) Office of the City of Philadelphia and the Philadelphia Police Department, the researchers will develop a data-driven strategy and performance measurement system for Philadelphia's focused deterrence law enforcement approach introduced in 2012, and conduct a comprehensive process/outcome/impact/cost-effectiveness evaluation of the strategy on community-wide gun violence and gang behavior. ("Measuring Success in Focused Deterrence," NIJ 2013)[17].

By and large, however, the bulk of interventions focused on developing and/or evaluating analytical strategies to support *forensic* investigation of gun crime ($N = 44$, or 52 percent of project abstracts adopting a criminal justice approach). Such project abstracts focused on material analysis of spent cartridges, gunshot residue, body armor deformation after gunshot trauma, gunshot wound interpretation, serialization of firearms, firing pin impressions, concealed weapons surveillance, audio analysis of gunshots, and more. For example, consider the following:

> This project will experimentally test the effect that bullets of two different constructions (hollow point vs. full metal jacket) have on human skulls in terms of fracture pattern and amount of damage, as assessed by centimeters of total fracture. ("Initiation of a Gunshot Wound Trauma Atlas From Cranial Bone," NIJ 2016)[17]

> This project will investigate the degree to which gunshot detection technology (GDT) aids in the response, investigation, and prevention of firearms violence and related crime. While the ability of the technology to detect firearm discharges is well established through prior NIJ-funded research, no rigorous research to date has documented the implementation, use, and impact of GDT on desired firearms violence reduction outcomes." ("Evaluating Gunshot Detection Technology (GDT) to Aid in the Reduction of Firearms Violence," NIJ 2015)[17]

> This study will provide a statistical inference for assessing the presence and prevalence of gunshot residue on an individual with respect to a large population. Persons placed under arrest or detained within a large prison population will be tested for gunshot residue ("Gunshot Residue in a Non-firearm-related Detainee Population," NIJ 2010).[17]

Such project abstracts tended to adopt highly technical jargon, circumventing any potential controversy with respect to gun policy or gun politics. This is a crucial characteristic of the criminal justice approach as we saw it implemented in the set of project abstracts we analyzed: It not only *depoliticized* guns by emphasizing the problem of guns as a problem of crime, but it also *depoliticized* guns by turning a political process (i.e., criminal justice) into a technical problem. Nevertheless, in some cases, these project abstracts were clear in their goal of enhancing the criminal justice system, often emphasizing their relevance to law enforcement and courtroom; as one study of firearm identification noted, "This will benefit law enforcement and their ability to present firearm identification and tool mark evidence in the courtroom" ("Applied Research and Development of a Three-dimensional Topography System for Imaging and Analysis of Striated and Impressed Tool Marks for Firearm Identification using GelSight," NIJ 2013).[17] Unlike the public health approach (as we will see below), these objectives were presented as self-evident; no concerns regarding political feasibility were mentioned in the forensic project abstracts we analyzed.

Depoliticizing gun research by focusing on issues of gun crime, and transforming questions about gun policy into issues of crime prevention and forensic implementation, the criminal justice approach represents the centrality of criminal justice in scientific inquiry on funded research on guns, what we term as "knowing through crime." The criminal justice approach, as we found, not only captured the majority of project abstracts funded by federal agencies; it also was the central approach with which other approaches—with some important exceptions—were in explicit or implicit conversation. To demonstrate, we now turn to studies that adopted a public health approach.

Public Health through Criminal Justice

Public health approaches to guns are sometimes popularly assumed to posit guns as harm-inducing objects in and of themselves (see, e.g., Kellermann et al. 1993 and its reception). However, in our data set, the public health approach to guns was distinguished from other approaches insofar as it (1) tended to consider gun harm in broader forms, including noncriminal forms of gun injury and death (e.g., suicide) as well as risky, but not necessarily criminal, gun-involved behaviors (e.g., gun ownership by people who also consume alcohol); (2) considered interventions at multiple stages (e.g., reducing the gun stock, controlling gun access, or addressing the aftermath of gun harm); and (3) evaluated and/or developed interventions above and beyond criminal justice mechanisms. We found that 44 funded project abstracts (19 by NIH; 19 by NIJ; 6 by NSF) adopted a public health approach (nearly $23 million in funding; see supplemental appendix Table 4). This included 19 funded project abstracts (8 by NIH; 11 by NIJ) that adopted and integrated *both* criminal justice *and* public health approaches.

A relatively small group of project abstracts engaged firearms as the *central* object of analysis from an *exclusively* public health perspective. These included a study on married couples' decision-making regarding firearms storage, a study on veterans' risk of suicide, and a study on community trauma in the aftermath of a mass shooting:

> Because a home free of hazards is essential to children's safety and well-being, it is important to understand determinants of firearm ownership and storage practices among parents . . . The proposed study will examine this issue by uncovering processes that underlie married couples' decision-making about firearm ownership and storage. ("Minority Pre-doctoral Fellowship Program," NIH 2003)[17]

> An estimated 22 Veterans die from suicide daily with approximately 67% of those deaths occurring by means of firearms. However, there has been very little research designed to identify modifiable

> factors or inform programs that could reduce the rate of firearm-related suicide . . . comparatively little is known about the context and characteristics of risk among those in suicidal crisis and why Veterans overwhelmingly choose firearms as their method of suicide. ("Context and Characteristics of Non-fatal Suicide Attempts Involving Firearms," NIH 2014)[17]

> On April 16, 2007 the worst mass shooting in U.S. history occurred on the Virginia Tech campus. . . . [the study will examine] coping strategies used during and shortly after the event (especially approach vs. avoidance coping) which may determine how factors such as prior adjustment and exposure to the event relate to later adjustment. The role of proposed resiliency-promoting factors such as perceived social support and help provided to others on psychological adjustment will also be examined.
>
> ("Coping, Adjustment, and Resilience Among College Women Following the Mass Shooting at Virginia Tech," NSF 2007).[17]

In each of these cases, the research focused on environmental characteristics that made firearm harm more likely or—if gun harm had already occurred—more harmful.[19]

More often, however, project abstracts adopting a public health approach decentered a public health approach to guns. Such project abstracts adopted and integrated other approaches of gun violence, especially criminal justice approach. Public health project abstracts, for example, focused on youth offenders even as they purported to address the much broader intersection of alcohol use and firearms behaviors ("Learning about Violence and Drugs among Adolescents," NIH 1998); they emphasized the impact of criminal justice policies aimed at gun prohibition enforcement ("Alcohol Availability and Intimate Partner Homicide," NIH 2005); and they examined the criminal justice involvement of hitherto lawful gun owners ("Alcohol, Drug, and Other Prior Crimes and Risk of Arrest in Handgun Purchasers," NIH 2015).[17] Further illustration of this confluence of criminal justice and public health approaches is the forensics work that appears to straddle the two approaches. For example, consider a grant awarded by NIJ to Smith & Wesson, the firearms manufacturer:

> This project will provide for further advance in the research and development of Smith & Wesson's Smart Gun prototype using biometrics and an electronic firing system to disable the firearm from use by an unauthorized user. Initial funding will support an analysis of the existing electronic fire/combination lock system and a review and optimization of the existing design for manufacturability and assembly. ("Development of an Authorized-user-only Handgun," NIJ 2000).[17]

A forensics study aimed at enhancing technologies that prevent gun use by unauthorized users; such technologies could be used to buttress criminal justice mechanisms (e.g., by providing this technology to police agencies to prevent stolen guns to be used against officers or private civilians) or to enhance firearms safety practices among private civilians. Stripped of its explicit end-use, this study depoliticizes debates regarding the often-controversial topic of "Smart Guns" into a question of biometric analysis—removing any reference to public health objectives (and financially assisting private industry in the process).

This "criminalization" of public health scholarship should not be surprising; as noted by public health scholars (Metzl 2019), public health scholars have proactively pursued funding for firearms-specific research by strategizing both the empirical parameters and theoretical approaches of their scholarship. Some studies are explicit in this regard. For example, one study explicitly noted that its focus on alcohol reflected the unfeasibility of firearm-focused interventions:

> Injury reduction measures that focus on firearms can sometimes be protracted strategies that must contend with ambivalent political support and uncertain consequences. Because individuals may place themselves at risk simply by entering a neighborhood where alcohol is present, regardless of their consumption, alcohol may function as a strong, although sometimes indirect, contributor to violence committed with firearms. ("Case Control Study of Alcohol Outlets & Firearms Violence," NIH 2002)[17]

Perhaps anticipating the claim that public health research in general and public health research on guns in particular is politically motivated (again, see Metzl 2019), another study on gun violence in New Haven, CT, explicitly appealed to the noncontroversial, "apolitical" nature of its approach (resonant with a social justice approach—see below), noting that,

> Novel aspects of this study include . . . framing gun violence as a chronic, manmade disaster with effects that can be mitigated through community resilience—an apolitical public health mechanism unrelated to gun ownership. ("Building Resilient Neighborhoods and Positive Social Networks to Prevent Gun Violence," NIH 2016).[17]

Although a public health approach certainly includes criminal justice mechanisms as one possible kind of intervention, the fusion of public health approach and criminal justice approach in roughly half of all studies adopting a public health approach suggests that "knowing through crime" has not just dominated gun research—It has also inflected public health thinking on guns. This seems especially clear when contrasted with the overlap in approaches present in NIJ studies, as only 24 percent of these also included elements of a public health frame based on our qualitative analysis.[20] This suggests that not only does the NIJ fund more projects related to firearms overall, but that bleeding of the criminal justice approach into other areas is reflective of its overall dominance rather than a broader trend toward multifaceted approaches to firearms research.

Despite the CDC funding freeze, then, public health approaches to gun research continued to be federally funded, but not infrequently, the studies that were funded conflated a public health approach to guns with a criminal justice approach.[21] Public health research appears to have found a lifeline in situating research objectives within a criminal justice approach—and reinforcing, rather than critiquing, the dominance of the criminal justice approach in the process.

Against and Beyond

The criminal justice approach was a dominant research approach—adopted not just by criminologists but also by scholars rooted in various academic disciplines. However, not all research embraced or integrated the criminal justice approach. A smaller subset of project abstracts explicitly situated themselves *in contrast* to a criminal justice approach by adopting a critical lens toward criminal justice processes (the social justice approach) or situating themselves *beyond* the criminal justice approach by emphasizing the processes by which approaches to guns—not just as adopted by researchers but also by the public more generally—are consolidated and reproduced (the political culture approach).

The social justice approach is characterized by three key ingredients: (1) an emphasis on inequality; (2) a focus on community empowerment among marginalized groups; and/or (3) a critical inquiry into criminal justice outcomes beyond crime control, especially outcomes detrimental to equality. Characterizing a much smaller group of project abstracts ($N = 13$, \$8.5 million in funding; see supplemental appendix Table 4) than the criminal justice or public health approaches, these project abstracts spanned NIH ($N = 2$), NIJ ($N = 6$), and NSF ($N = 5$). They included an analysis of the school-to-prison pipeline; an examination of the relationship between gun violence and racial disparities in criminal justice treatment; racial bias in police violence;

and an evaluation of participatory peace circles in New York City. Each of these project abstracts was situated *against* the criminal justice approach outlined above by rethinking the criminal justice system as a mechanism for the reproduction of inequality, particularly racial inequality. For example, one project abstract both recognizes and contests the hegemony of the criminal justice approach by noting, "Recognizing the potentially deleterious consequences of criminalizing school discipline, schools are increasingly turning to alternative methods for holding students accountable for misbehavior" ("A Randomized Controlled Trial of Participatory Peace Circles in New York City Schools," NIJ 2016). Other project abstracts emphasized non-criminal justice mechanisms of community empowerment, with some overlap with the public health approach. One study, for example, focused on Chicago's CeaseFire community groups, which explicitly work independently from public law enforcement, as an example of a public health intervention ("Keys to Successful Implementation of Street Outreach for Violence Prevention," NIH 2009); another study took a similar community-focused approach to Pittsburgh's One Vision One Life program ("One Vision One Life Evaluation," NIJ 2006).[17] Dismantling and deconstructing rather than adopting and integrating the criminal justice approach, these project abstracts displaced criminal justice thinking in favor of centering issues of inequality and empowerment.

Whereas project abstracts adopting a social justice approach *explicitly* decenter criminal justice thinking, the small number of studies adopting a political culture approach ($N = 9$, $1.2 million in funding; see supplemental appendix Table 4) *implicitly* decenter it, instead analyzing the political and cultural underpinnings of gun attitudes and gun policies in the United States by focusing, for example, on questions of political elites and mass partisanship ("The Influence of Competitive Elite Issue Framing on Public Opinion and Mass Partisanship," NSF 2005), the cognitive dimensions of risk ("The Cultural Cognition of Risk," NSF 2006), and the implicit and explicit impacts of culture and gun prevalence on attitudes on guns ("A Psychology of Gun Ownership," NSF 2016).[17] Illustrating the urgency of recent calls for understanding the meanings that people in the United States attach to guns (Metzl 2019), these studies of political culture were exclusively funded by the NSF.

Some project abstracts, then, decisively departed from criminal justice approaches to guns and gun harm. However, these exceptions largely proved the rule with respect to the dominance of criminal justice thinking in federally funded gun research: The project abstracts resisting the criminal justice approach—whether explicitly through a social justice approach or implicitly through a political culture approach—represented only a small proportion of overall federal funding to gun research.

Discussion and Conclusion

Our analysis suggests that the popular characterization of the federal funding environment on gun research as a "funding freeze" misses the larger terrain of federally funded gun research since the passage of the Dickey Amendment. Although the ban on CDC-funded gun research impacted gun research by eliminating a significant source of public health–related research funding, the result is more complicated than popular accounts suggest. Scholarship on guns has continued to be funded by federal agencies such as the NIJ, NSF, and NIH, but funded projects disproportionately reflect a criminal justice approach to guns as objects of research and points of public policy. Had the CDC not be targeted by gun rights advocates for funding cuts, the dominant approach may have been public health; in the CDC's absence, even public health approaches to guns often, though not always, integrated a criminal justice approach into their line of inquiry. The CDC's withdrawal from gun research, even as other agencies continued to engage in gun research, raises two key questions: Why was only the CDC was targeted by gun rights advocates and not other agencies, and why didn't the CDC pivot to funding criminal justice research after

the ban on research "advocating gun control"? Differences in the vulnerability of these different agencies to the political environment and their internal organizational politics notwithstanding (an interesting topic that is nevertheless beyond the scope of this paper), we believe the CDC's explicit embrace of public health as its organizational mandate both landed the organization squarely in the sights of gun rights advocates, which in turn made it more difficult for the organization to pivot to other approaches to firearms research without inciting incapacitating skepticism and scrutiny from critics—or so it believed. The CDC's aforementioned willingness to directly inform the NRA of its gun-related funding activities, for example, suggests just how eager the agency may have been to appease such critics in the aftermath of the Dickey Amendment.

Broadening out from the CDC, we have proposed that the dominance of the criminal justice approach among federally funded gun research reflects the broader predominance of criminal justice as a means of governance, a mode of understanding and addressing social problems, and a way of knowing within American society. This dominance is, no doubt, reflected in the dominance of the NIJ in funding gun research; however, we caution against assigning undue explanatory power to the NIJ's stated funding objectives. We are skeptical about an affinity among criminologists and criminal justice scholars (as compared with other kinds of scholars) for firearms research that is epistemologically independent from the broader politics of crime in which U.S. criminologists and criminal justice scholars are necessarily embedded. The underlying assumption that criminologists and criminal justice scholars would be more inclined to engage in firearms research than scholars in other disciplines is likely to be, in our view, a key indication of the broad appeal of "knowing through crime." Furthermore, the prevalence of a criminal justice approach *across* federal funders lends credence to the argument that broader presumptions regarding guns as objects of study, rather than disciplinary or funding agency proclivities, may be driving the adoption of a criminal justice approach.

Overall, we suggest that "knowing through crime"—that is, the dominance of crime and criminal justice thinking as a means of generating knowledge about the world—has shaped gun research, perhaps garnering it legitimacy in an otherwise hostile political environment. But insofar as research stands to shape both the conceptualization of social problems such as gun violence and the preferred approaches to solving these problems, researchers are in a unique position to reproduce dominant paradigms—or resist them. "Knowing through crime" may shape knowledge about guns, but its impact reaches beyond the question of knowledge production, influencing not just what we *know* about guns but also what we *do* about guns. The apparent preponderance of criminal justice–oriented research within gun research may well provide a "scientific" basis for gun policies to be articulated through a "tough on crime" approach that aligns with broader policy trends toward criminalization, particularly of Black people and people of color. Such trends are historically long-standing. As J. Forman (2017:75) notes, instead of social services, trauma support, and economic revitalization, communities "plagued" with gun violence have long received gun "prohibition . . . backed with law enforcement and an escalating series of criminal penalties." Accordingly, he concludes that in many ways "the gun control debate [has] mirrored the marijuana fight in form and outcome" (p. 75) with "the people who go to prison for possessing guns . . . overwhelmingly black and brown (p. 77). Rather than "gun control," Forman adopts the term "War on Guns" to draw parallels between gun policy and drug policy, particularly regarding the criminalization of social problems and the racialization of crime. As Forman (2017) explicitly details, this approach has deleterious consequences for Black people and people of color already targeted by criminalization (Alexander 2020), buttressing racial disparities in policing and mass incarceration and reproducing racial ideologies in terms of who is targeted as a gun criminal versus who is deemed a "good guy with a gun" (see also Carlson 2019, 2020). Our research suggests that this understanding of gun violence as primarily a problem of crime is not just reflected in the kinds of gun policies that are passed at local, state, and federal levels; it also

appears to be reflected in the kind of gun research that has garnered federal funding since the passage of the Dickey Amendment.

While our study demonstrates the partiality of the popular "funding freeze" narrative regarding the federal funding of gun research, our findings are limited to a particular data set and time period. Specifically, we analyzed a set of federally funded project abstracts from 1996 through 2016 that were publicly available on the NIH, NIJ, and NSF Web sites; given that these Web sites maintain public-facing databases of funded projects, we did not file time-intensive and possibly resource-intensive Freedom of Information Acts to inquire about the completeness of the publicly available data. In addition, the inability to compare the approaches present in rejected versus funded abstracts leaves questions regarding causality, as it is not possible to determine to what degree the criminal justice approach dominates due to funding decisions on the part of the institutions included in the study rather than from researchers' decisions to embrace this approach proactively. Furthermore, we relied on a period entirely *after* the CDC ban on gun research funding to map out the terrain of federally funded gun research in its aftermath. Accordingly, our data do not allow us to make an argument about longitudinal change with regard to either the quantitative or qualitative aspects of federally funded gun research; such a project would be a worthwhile follow-up to the study presented here, especially as efforts are made to restore CDC funding for gun-related research (Melillo 2019). Finally, scholars who receive federal funding are generally not required to publish results that reflect the frameworks of inquiry initially adopted in funded proposals, while gatekeepers beyond funding agencies—journal reviewers, tenure letter-writers, book editors—may also shape how scholars frame their objects of inquiry. While we did not track the relationship between funded project abstracts and studies subsequently published out of these projects, doing so would provide more insight into the terrain of gun knowledge and the degree to which it has been impacted by the processes suggested here.

Crime and criminal justice have not just dominated the American imagination; our findings suggest that they have also dominated the American intellect. We expect that further inquiry will reveal that "governing through crime" (Simon 2007) has impacted not just how guns are addressed as a public policy concern but also as an object of scientific inquiry—that is, the process we describe as "knowing through crime." Furthermore, while this paper is focused on gun research, it also raises broader questions regarding just how much the centrality of crime in the political, social, cultural, and economic lives of Americans has impacted the production of knowledge. Our findings on federal funding likely extend far beyond guns to other issues that have been reconstructed as issues of criminal justice under the War on Crime, including drug addiction (Tiger 2013), intimate partner violence (Bumiller 2008), child welfare (Roberts 2009)—all of which are increasingly *thought about* in terms of criminal justice, largely *governed through* criminal justice apparatuses, and often *reproduce* both racist ideas about criminality *and* racial disparities in criminal justice that further entrench those ideas. Our findings also suggest alternatives for contesting the dominance of criminal justice thinking (and, to some degree, the long-standing racialization of crime) for guns and beyond, such as the social justice approach as well as the political culture approach. Accordingly, we hope this study encourages scholars—particularly gun scholars—to reflexively engage the shadow of criminal justice thinking on our imaginations and our intellects.

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Supplemental Material

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Notes

1. The term "War on Guns" has been used by both conservatives as a means of rhetorically constructing an assault on gun rights, and by more critical scholars to denote a criminalization approach to addressing social problems(see Forman 2017). The latter draws parallels between the State's emphasis on gun violence as a problem of crime, similar to the "War on Drugs" or "War on Crime" more broadly. It is in this second sense that we employ the term "War on Guns."
2. After heading the U.S. Office of Scientific Research and Development during World War II, Bush would play a crucial role in the founding of the National Science Foundation in 1950.
3. For a sprawling review of the relationship between the discipline of economics and the U.S. military in the twentieth century, see P. Mirowski (2002).
4. Although G. Gauchat (2015) uses the term "authoritarianism" in his analysis, "populist" captures the anti-pluralist ethos of authoritarianism while also highlighting anti-elitist sentiments that drive this rejection of scientific influence on public policy.
5. We note that not all sciences follow the analysis that Kuhn details, not least because not all sciences are best captured by a paradigm-oriented organization of knowledge. For debates on paradigms within sociology, see D. L. Eckberg and L. Hill (1979) and G. Ritzer (1975).
6. As another illustration outside of the realm of science, consider gender scholars who emphasize the patriarchal household as providing the cultural tools needed to imagine and legitimate the form of power consolidated by the modern Western state (Dubber 2005; Scott 1986).
7. Although our focus here is on crime and criminal justice, this observation extends beyond these domains. For example, for a fascinating analysis of this phenomenon with respect to the social construction of markets, see D. A. MacKenzie, Muniesa, and Siu (2007).
8. As J. J. Scheurich and M. D. Young (1997:8) note, "epistemological racism means that our current range of research epistemologies—positivism to postmodernisms/poststructuralisms—arise out of the social history and culture of the dominant race, that these epistemologies logically reflect and reinforce that social history and that racial group (while excluding the epistemologies of other races/cultures), and that this has negative results for people of color in general and scholars of color in particular."
9. For a historical account of how one instantiation of "knowing through crime"—namely, the mode of inquiry celebrated in the detective novel—intersected with the emergence of modern governance in Europe, see L. Boltanski (2014).
10. We acknowledge, of course, that social science itself can be a powerful means of legitimizing popular accounts involving crime, criminality, and criminal justice; for example, E. Dowdy (1994) shows that federally funded criminological research reflects dominant discourses on crime (such as individualistic explanations) rather than more critical approaches (such as systematic or institutional perspectives).
11. https://www.nsf.gov/awardsearch/
12. https://projectreporter.nih.gov/reporter.cfm
13. https://nij.ojp.gov/funding/awards/list.
14. C_V coherence measures were used to assess model fit. For an overview of topic coherence measures and why the C_V measure is preferable to other approaches, see M. Röder, Both, and Hinneburg (2015).

15. We qualitatively coded abstracts for each approach independent of the other approaches; therefore, some abstracts were coded as employing multiple approaches. While topic modeling suggests a hierarchy of approaches (as it grouped abstracts by dominant topic), we did not impose a hierarchy on approaches in our qualitative analyses. Therefore, we report abstracts with multiple approaches in the counts for those respective approaches as well as in any counts of abstracts with multiple approaches.
16. We remind the reader that these percentages are larger for qualitative analysis given that abstracts could be coded with multiple frames, in contrast to topic modeling.
17. For reference, we include project abstract title, funding agency, and year for the excerpts presented here.
18. In contrast, studies explicitly located in social locales other than urban contexts—for example, the mass shootings at Virginia Tech—did not adopt this approach (see more on the public health approach, below), instead framing individuals involved in gun crimes as victims and survivors, while some studies involving urban locations that did not take on a criminal justice approach tended to explicitly problematize issues related to race—by taking on a social justice approach (see below). We note that the lack of racial code words and/or explicit racializing in such studies reflect the "invisibility" of whiteness (Dyer 2000).
19. Note that this appears to contrast with the public health studies of the early 1990s, which focused not just on managing gun harm but also on evaluating whether the presence of a gun in itself was a harm-generating object.
20. The qualitative analysis is most "generous" in this regard because it allows for a single abstract to be coded with multiple frames. In our topic modeling analysis, which allows an abstract to be associated with no more than one topic, this figure drops to 20.3 percent.
21. Whether this conflation of public health and criminal justice approaches was primarily a result of researcher-driven, supply-side dynamics or funder-driven, demand-side trends is unclear; our data set does not allow us to make causal analyses in this regard. We note, nevertheless, that our core findings are not dependent on the direction of causality.

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